



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

## INDEX

- Aeration, Lowell, 135, 144
- Albany, N. Y., pumping engine tests, 287
- Algae, effect of covering service reservoir on, 532
- American Public Health Association, regulations for sanitary control of waterways, 384
- American Water Works Association; is it doing its full duty? 267
- Annual Convention, report, 395
- Annual presidential address, 267
- Auburn, N. Y., funding sidewalks and plumbing, 499
- thawing services, 548
- Bacteria, Denver water supply, 372
- Detroit water supply, 473
- effect of covering a service reservoir, 532
- effect of ultra violet rays, 177
- quality of water and confirmatory tests for *B. coli*, 200
- relation to river stage and turbidity, 74
- swimming pool counts, 88
- Treasury Department standard for drinking water, 478
- Washington water supply, 532
- Baltimore, Md., pumping station labor costs, 298
- results of chlorination, 284
- thawing pipes electrically, 550
- Boiler-room management, 419, 426, 429, 509
- Boilers, fire underwriters' recommendations, 437
- rebuilding water-tube, 418
- Boone, Iowa, inverted siphon in suction main, 110
- Booster station, Sioux City, 58
- Boston, Mass., pumping engine tests, 287
- pumping station practice, 504
- Bronze, corrosion in meters, 38
- failure of filter strainers, 472
- Brooklyn, N. Y., improvement of pumping station operation, 347
- Carbon dioxide in water, removal, 129
- Cast iron service pipes, 258
- Cement gun, 454
- Cement, Portland, 450, 460, 462, 463
- Central States Section, 554
- Charter, Clarksburg, W. Va., water board, 517
- Chemical method of gaging flow, 192
- Chimney for 2200 boiler horse power, St. Louis, 420
- Chlorination, chlorine cell installation of the Montreal Water & Power Co., 337
- comparative tests of liquid chlorine and hypochlorite, 228
- Council Bluffs, 74
- Croton watershed, 9, 10, 11, 12
- Detroit, 208, 473
- frequent change of dose sometimes needed, 234
- Lake Michigan supplies, 233
- Minneapolis, 470, 476
- need of careful management, 220
- point of application of dose, 473, 477
- recent progress in, 287
- Rockaway River watershed, 26
- swimming pools, 92
- Cholera at Hamburg and Altoona, 32
- Chutes for concrete, 452, 463
- Cincinnati, O., pumping engine tests, 287
- Cities, insurance classification for small, 363
- Clarksburg, W. Va., new charter for water board, 517
- Cleveland, O., results of chlorination, 284
- Coagulation, Council Bluffs, 70
- Minneapolis, 467, 469
- piping for coagulants, 465, 474
- Coal, mixing anthracite and bituminous, 510
- purchasing methods, Boston, 507
- Omaha, 428, 514
- St. Louis, 426
- Commissions for regulating public utilities, 46
- Committee reports, electrolysis, 386
- executive, 404
- finance, 409
- prevention of stream and lake pollution, 383
- publication, 412

- Committee reports, standard specifications for cast iron water pipe and special castings, 389  
 water consumption, 378  
 Concrete atomizer, 454  
 Concrete, painting, 467, 475  
   resistance to weathering and methods of repair, 447  
 Convention at Richmond, report, 395  
 Conventions, conduct of, 275  
 Copper sulphate, high bacteria counts  
   after use, 77, 534  
   use in Croton Lake, 9  
   use in swimming pools, 93  
 Council Bluffs, Iowa, treatment of water, 70  
 Croton watershed sanitation, 6, 32  
  
 Dam, earth, at Mattoon, Ill., 214  
 Davenport, Iowa, water works, 104  
 Deaths of members, 127, 264, 416, 555  
 Denver, Colo., bacteria in raw and treated water, 372  
   trenching machine work, 527  
   water rates suit, 54, 56  
 Des Moines, Iowa, chemical method of gaging flow in galleries, 192  
   handling bad water complaints, 62  
   results of chlorination, 284  
 Detroit, Mich., coal purchases, 429  
   thawing pipes electrically, 547  
   trenching machine work, 524  
   water-works, 206  
 Disinfection, see Chlorination, Copper sulphate and Ultra-violet rays.  
 Drinking fountains, sanitary, 65  
  
 Electrical thawing of frozen pipes, 538, 544  
 Electrolysis, American Committee on  
   Electrolysis, 125  
   cable covering, 41  
   chlorine cells, 337  
   pipes, New York, 40  
   report of committee on, 386  
   water meters, 38, 43  
 Elgin, Ill., experience with meters, 368  
 Emergency supplies, danger, 220, 445  
   chlorination of, 446  
 Erie, Pa., results of chlorination, 284  
 Evanston, Ill., results of chlorination, 284  
 Executive Committee, report, 404  
  
 Filters, Davenport, Iowa, 104  
   Detroit, Mich., 210  
   effect on typhoid rate, 282  
   Lake Michigan supplies, 233  
   Filters; Lowell, Mass., 143  
   Minneapolis, Minn., 465  
   Moline, Ill., 108  
   practical problems in operation, 465  
   Rock Island, Ill., 107, 465  
 Finance Committee, report, 409  
 Fire protection, charges for, 316  
   insurance classification for small cities, 363  
   pumping stations, 432  
 Flint, Mich., coagulant piping, 475  
 Flow in conduits, measuring by chemical methods, 192  
 Forestry, Newark watershed, 2  
 Four-state Section meetings, 263  
 Funding sanitary improvements as a means of increasing water consumption, 489  
  
 Gaging flow by chemical methods, 192  
 Galleries, collecting, Des Moines, 192  
 Galvanizing pipes, 189  
 Gary, Ind., plumbing installations, 499  
  
 Hydrants, early, 332  
  
 Illinois Section, what it has done and what it can do, 223  
   meetings, 260  
 Indianapolis, Ind., percentage of non-consumers in city, 492  
   trenching machine work, 528  
 Insulating joints, 45  
 Insurance classification for small cities, 363  
 Intakes in Lake Michigan, 231  
 Inverted siphon in suction main, 110  
 Iowa section, 553  
 Iron in water, removal, 129  
  
 Jersey City, N. J., results of chlorination, 284  
   sanitation of watershed, 14  
  
 Kansas City, Mo., results of chlorination, 284  
  
 Laboratories, allowing for distance from sampling point, 485, 486  
   car of Treasury Department, 480  
   use in meeting bad-water complaints, 62  
   value in control of water treatment plants, 372  
 Lake Michigan, supplies drawn from, 231  
 Lead, effect of Lowell water on, 134

- Lime, feeding device at Council Bluffs, 72
- Lowell experiments in decarbonation, 131
- Louisville, Ky., buying coal, 429
- Lowell, Mass., decarbonation and removal of iron and manganese from ground water, 129
- Manganese in water, removal, 129
- Mattoon, Ill., municipal works for exclusive industrial service, 214
- Measuring flow by chemical methods, 192
- Members, new, 128, 264, 415, 554
- Meridian, Miss., funding plumbing installations, 501
- Meters, corrosion of bronze in, 38  
economy of, 368  
effect on bills, 118  
Elgin, Ill., 368  
on all services, 114  
Richmond, Va., 335  
recent progress in use, 292  
repairs, 370, 371  
St. Paul specifications, 83  
tests, 118  
Venturi, prevention of stoppage by mud, 423
- Milford, N. J., pumping engine tests, 287
- Milwaukee, Wis., typhoid fever, 237
- Minneapolis, Minn., filter plant operation, 466  
polluted well water, 483  
raw and filtered water mains forbidden to be connected, 446  
sterilizing water mains, 469  
troubles in constructing a 48-inch submerged main, 355
- Minnesota Section, 126, 415
- Missouri River, treatment of water at Council Bluffs, 70
- Moline, Ill., water works, 108
- Montreal, P. Q., chlorine cell installation of the Montreal Water & Power Co., 337
- Newark, N. J., protection of watershed, 1, 35, 37
- New Jersey, law closing toilets of cars passing watersheds, 21  
laws relating to pollution of water supplies, 21
- New members, 128, 264, 415, 554
- New York, sanitation of Croton watershed, 6, 32  
thawing frozen water mains, 538  
trenching machine work, 521
- New York Section, 126, 263
- Oil, methods of purchasing, 426, 513, 515
- Omaha, Neb., buying coal, 428, 514  
results of chlorination, 284  
trenching machine work, 527
- Paint for concrete chemical-solution tanks, 467, 475
- Paying for plumbing by installments, 489
- Pennsylvania Water Works Association, 126
- Pequannock River, sanitation of, 1, 35, 37
- Permutit water treatment, 345
- Philadelphia, Pa., results of pumping engine tests, 287
- Pipe, corrosion by alkali, 43  
Lowell water, 134  
of old Richmond, 333  
iron and steel, 183, 253  
electrolysis, Brooklyn, 41  
Hoboken, 42  
insulating joints, 45  
Newark, N. J., 42  
New York, 40, 44  
San Antonio, Tex., 43, 44  
for coagulants, 465, 474  
report of committee on revision of standard specifications, 389  
submerged, Boone, Iowa, 112  
Minneapolis, Minn., 355  
Puerto Barrios, Guatemala, 165  
vitrified clay gravity main, Mattoon, 215
- Piping, steam, 419  
fire underwriters' recommendations, 437  
small sizes, 510  
water, in pumping stations, 440
- Pittsburgh, Pa., pumping engine tests, 287
- Plumbers, licensing, 520
- Plumbing, funding installation of, 489
- Pollution of streams and lakes, report of committee on prevention of, 383
- Poughkeepsie, N. Y., results of chlorination, 284
- President's annual address, 267
- Private fire supplies, 82, 316
- Public health and public utilities, 218  
and water supplies, 282
- Publication committee's report, 412
- Puerto Barrios, Guatemala, experience with a submerged pipe line, 165

- Pumping stations, Davenport, Iowa, 105  
 Detroit, Mich., 210  
 effect of type on labor charges, 297  
 improved efficiency of St. Louis, 417  
 inverted siphon in suction, 110  
 Lowell, Mass., 148  
 Mass. metropolitan water district, 504  
 Moline, Ill., 108  
 recent progress in, 288  
 records of cost and efficiency, 347  
 reliability of pumping station design, 432  
 Sioux City booster, 58  
 tests of deep well stations, University of Illinois, 190  
 Champaign & Urbana Water Co., 239
- Quincy, Ill., laboratory control of treatment, 374
- Rahway, N. J., financing suburban extensions of mains, 501
- Railways, regulations relating to operation across watersheds, 25, 30, 31, 37  
 Treasury Department standards for drinking water, 478  
 water supply rates, 326
- Rates, see Water rates
- Red water, see Water, red
- Regulation of water works by commissions, 46, 218, 276
- Reservoirs, effect of covering service, 532
- Richmond, Va., annual convention, 395  
 early water works experiences, 332  
 trenching machine work, 527
- Rockaway River sanitation, 14
- Rock Island, Ill., filters, 465, 466, 474  
 water works, 106
- Rusting of iron, 256
- Saginaw, Mich., thawing frozen services, 551
- Sand for concrete, 450
- Sanitary drinking fountains, 65
- Sanitation of watersheds, Croton, 6, 32  
 Jersey City, 14, 36  
 Newark, 1, 34, 37
- Secretary's report, 405
- Sections of the Association, what they can do, 223, 274  
 meetings, 126, 260, 415, 553
- Sediment, Whipple test for, 63
- Service charges, see Water rates
- Services, cast iron, 252  
 extension to curb before paving, 121  
 metering all, 114  
 steel and wrought iron, 183  
 St. Paul, 81  
 thawing frozen, 538, 544  
 useful life, 258
- Sewage treatment, Croton watershed, 9  
 Rockaway River watershed, 26
- Sioux City, Iowa, booster station, 58
- Siphon in suction main, inverted, 110
- Society affairs, 125, 260, 395, 553
- Spring Valley Water Co., rates litigation, 54, 56
- Standpipes, effect on pumping station capacity, 435
- Steam piping, see Piping, steam
- Steamship water supply, 31
- Steam superheaters, 427
- Steel water pipe, 183
- St. Louis, Mo., coagulant piping, 475  
 improved efficiency of pumping stations, 417  
 pumping engine tests, 287
- Storage, effect on pumping station capacity, 435
- St. Paul, Minn., organization of water department, 78  
 thawing frozen pipe, 550
- Submerged pipe, Boone, Iowa, 112  
 Minneapolis, Minn., 355  
 Puerto Barrios, Guatemala, 165
- Suction main, inverted siphon in, 110
- Sulphur in coal, 509
- Superheaters, St. Louis tests, 427
- Swimming pools, 86
- Terre Haute, Ind., rates, 55
- Thawing frozen pipes electrically, 538, 544
- Tonsillitis epidemic due to drinking fountains, 68
- Treasurer's report, 408
- Treasury Department standard for drinking water, 478
- Trenching machine work, 521
- Troubles in constructing a 48-inch submerged main, 355
- Turbidity, effect on coagulation, 73  
 relation to river stage and bacteria, 74
- Typhoid fever, Croton River watershed, 7  
 effect of water purification, 282  
 Milwaukee, Wis., 237  
 Newark, N. J., 5  
 Quincy, Ill., 374  
 Rockaway River watershed, 25

- Ultra-violet rays, for water purification, 172
- Valuation of water works, 50, 294
- Valves, on force and suction mains, 441
  - opening with portable motor, 468
- Walkerville, Ont., compulsory universal installation of plumbing, 501
- Washington, D. C., effect of covering a service reservoir, 534
- Water consumption, proportion of non-consumers in a city, 492
  - report of committee on, 378
- Water, cost of, Newark, N. J., 2
- Water mains, see also Services
  - cleaning at Lowell, 150
  - extensions into partly developed sections, 81, 501, 502
  - recent progress in distribution systems, 291
  - sterilizing, Minneapolis, 469, 476
  - thawing frozen, 538, 544
  - trenching machine work, 521
- Water meters, see Meters
- Water rates, large consumers, 317, 320, 321, 326
  - minimum rates, 115
  - output charges, 316
  - railway supply rates, 326
  - recent aspects of, 294
  - regulation by commissions, 46, 276
  - service charges, 116, 313
- Water, red, complaints in Des Moines, 63
  - Whipple sediment test, 63
- Watersheds, sanitation of, Croton, 6, 32
  - Jersey City, 14, 36
  - Newark, 1, 34, 37
- Water supplies, auxiliary emergency, 220, 445, 446
  - effect of temperature of water on consumption, 296
  - for exclusive industrial purposes, 214
  - Lake Michigan, 231
  - private fire supplies, 82
- Water supplies, recent progress and tendencies in municipal, 278
  - report of committee on prevention of stream and lake pollution, 383
- Treasury Department standard, 478
  - water accounted for, 296
- Water treatment, Council Bluffs, Iowa, 70
  - Davenport, Iowa, 104
  - decarbonation and removal of iron and manganese, 129
  - Detroit, Mich., 210
  - Lowell, Mass., 129
  - Moline, Ill., 108
  - Montreal chlorine cell installation, 337
  - practical problems in filtration plant operation, 465
  - recent progress, 282
  - Rock Island, Ill., 106, 465
  - swimming pool treatment, 90
  - ultra-violet rays, 172
- Water-works, charter of Clarksburg water board, 517
  - Davenport, Ill., 104
  - Detroit, Mich., 206
  - for exclusive industrial purposes, 214
  - forty-five years experience in, 332
  - funding sanitary improvements as a means of increasing water consumption, 489
  - insurance classification for small cities, 363
  - management, 78, 218, 300, 306, 517
  - Mattoon, Ill., 214
  - Moline, Ill., 108
  - regulation by commissions, 46, 218
  - relation to public health, 218
  - Rock Island, Ill., 106
- Wells, Champaign & Urbana Water Co., 239
  - Lowell, Mass., 129
  - Minneapolis, pollution, 483
  - Sioux City, Iowa, 58
  - University of Illinois, 190
- Whipple sediment test, 63

## AUTHOR INDEX

- ACKERMAN, J. WALTER, funding plumbing installations, 499  
thawing services, 548
- ALLEN, HARRY V., electrolysis, 41
- ALVORD, JOHN W., chemical method of measuring flow, 199  
recent progress and tendencies in municipal water supply in the United States, 278  
Treasury Department standards for water, 483
- APPLEBAUM, S. B., electrolytic chlorination, 345
- ARMSTRONG, JAMES W., labor charges in pumping stations, 297
- ATKINS, D. F., electrolysis, 41
- BAKER, M. N., financing plumbing installations, 500  
trenching machine work, 529
- BARBOUR, FRANK A., decarbonation and removal of iron and manganese from ground waters at Lowell, 129  
spouting concrete, 438
- BARNARD, H. E., public utilities and public health, 218
- BARNES, T. HOWARD, experience with a submerged pipe line in the Puerto Barrios water works, 165
- BARTOW, EDWARD, chlorination costs, 473  
standards for water, 484
- BEARDSLEY, J. C., use of water meters, 114
- BIEGLER, P. S., some tests on motor-driven deep-well pumps, 239
- BIRDSALL, LEWIS I., practical problems in filtration plant operation, 465  
sterilizing water mains, 485
- BREITZKE, CHARLES F., sanitation on the Rockaway River watershed, 14
- BROWN, C. D., financing plumbing installations, 501
- BRUSH, W. W., trenching machine work, 521
- BUTLER, R. A. (with F. C. Jordan), funding sanitary improvements as a means of increasing water consumption, 489
- CAPPELEN, F. W., pollution of deep well supplies, 483  
prevention of mingling of raw and filtered water, 446  
troubles in constructing a 48-inch submerged line, 355
- CARLIN, PHILIP, the Sioux City booster station, 58
- CARLSON, MARTIN R., water supply of the Quad cities, 104
- CARSON, HARRY Y., rusting of pipe in service, 252
- CHESTER, JOHN N., buying coal, 514  
funding plumbing installations, 498  
pumping station design, 444  
sanitary precautions for railway water supplies, 487  
service charges—how constituted, 313, 324  
tamping concrete, 457
- CHEYNEY, G. S., service charges, 321
- CLEMMITT, ROBERT L., thawing pipes electrically, 550
- COFFIN, T. D. L., sanitation of the Croton watershed, 6
- DAVIS, CARLETON, E., oil specifications, 513  
pumping station design, 444
- DAVIS, E. E., forty-five years' experience in water-works, 332  
trenching machine work, 527
- DAY, LEONARD A., improved efficiency of the St. Louis pumping stations, 417
- DEBERARD, W. W., uniformity of bacterial work of different laboratories, 372
- DOANE, ALFRED O., pumping in the Massachusetts metropolitan water district, 504
- DUNLAP, J. H., sanitary drinking fountain, 65
- DUTTON, M. S., sterilization by liquid chlorine and hypochlorite of lime, 228
- ENGER, MELVIN L., some costs of maintenance of motor-driven deep-well pumps, 190

- FISK, I. W., some tests on motor-driven deep-well pumps, 239
- FOLWELL, A. PRESCOTT, trenching machine work, 529
- FRENCH, D. W., electrolysis, 42
- FRITZE, L. A., value of laboratory control, 376
- GANZ, ALBERT F., electrolysis, 44
- GAUB, JOHN, effect of covering a service reservoir, 532
- GELSTON, W. R., utility of laboratory control, 373
- GOLDSMITH, CLARENCE, reliability of pumping station design, 432
- GREELEY, SAMUEL A., treatment of public water supplies from Lake Michigan, 231
- HANSEN, PAUL, what the Illinois Section has done and can do, 223
- HAWLEY, W. C., relations between water departments, companies, and the public, 300
- HAZEN, ALLEN, electrolysis, 43  
sanitation of watersheds, 37  
service charges, 322
- HENDERSON, CHARLES R., public and private water-works, 222  
pumping station operation, 513
- HERING, RUDOLPH, consumption as affected by temperature of water, 295  
dense concrete desirable, 458
- HIGBEE, I. M., trenching machine work, 530
- HIGHLAND, SCOTLAND G., new charter of the Clarksburg, W. Va., water board, 517
- HILL, JR., NICHOLAS S., electrolysis, 41
- HINMAN, JR., JACK J., swimming pool operation, 86
- HOUSE, GARRETT O., some problems of the water-works executive, 78  
thawing frozen services, 550
- HOWELL, R. B., coal buying, 428, 514  
trenching machine work, 526
- HUY, HARRY F., thawing frozen services, 551
- JAMES, CLAUDE L., municipal water-works constructed and operated solely for industrial service, 214
- JENKINS, E. J., thawing pipes electrically, 548
- JOHNSON, R. J., thawing frozen services, 551
- JORDAN, F. C. (with R. A. Butler), funding sanitary improvements as a means of increasing water consumption, 489
- KASTBERG, KARL C., inverted siphon in a suction line, 110
- KEMBLE, F. T., electrolysis, 43
- KIMBALL, FRANK C., financing plumbing installations, 503  
thawing frozen services, 548
- KIRKPATRICK, EARL T., experience in handling bad-water complaints and laboratory control, 62
- KIRSTEIN, A. F., paying for suburban extensions, 501
- KNOWLES, C. R., relation of the railroad to the city water plant, 326
- KÖHN, C. L., charges for railway water supplies, 331  
economy of meters, 368
- LEDoux, J. W., service charges, 320
- LEISEN, THEODORE A., buying coal, 429  
charges for railway supplies, 329  
Detroit water works, 206  
chlorination at, 473  
thawing pipes electrically, 547  
trenching machine work, 525
- LEOPOLD, F. B., filter plant design, 474
- LETTON, H. P., Treasury Department standard for drinking water, 478
- LONGLEY, FRANCIS F., concrete in water-works practice, 456  
water waste, 296
- LUSCOMBE, WILLIAM, plumbing installations at Gary, 499
- MACDONALD, E., charges for railway supplies, 329
- MACHEN, H. B., thawing frozen service connections by means of electric current, 538
- MARSH, R. C., repairing meters, 370
- MASON, W. P., sanitation of watersheds, 30
- MAXWELL, D. H., flow measurement in a water collecting gallery by the chemical method, 192
- McMANE, W. I., thawing frozen water mains and service pipes by electricity, 544
- MEADOWS, JAMES O., (with F. H. Pitcher), chlorine cell installation of the Montreal Water & Power Co., 337



- METCALF, LEONARD, omission of drinking cups on trains, 487.  
presidential address, 267  
some observations upon public regulation of water-works, 46  
trenching machine work, 527
- MILLIGAN, R. E., sanitation of watersheds, 31
- NELSON, FRED B., electrolysis, 38
- ORCHARD, W. J., sanitation of watersheds, 36
- PATTON, W. S., suburban extensions of water mains, 502
- PITCHER, F. H. (with J. O. Meadows), chlorine cell installation of the Montreal Water & Power Co., 337
- POTTER, ALEXANDER, electrolysis, 43  
sanitation of watersheds, 34
- PURDY, J. H., work done by the Pennsylvania Water Works Association, 126
- RACE, JOSEPH, sterilizing water mains, 473
- REIMER, A. A., relations between a water department and the public, 306
- ROOS, C. M., seeking better insurance classification for small cities, 363
- ROSENTRATER, HERMANN, electrolysis, 42
- SHERRERD, MORRIS R., protection of the watershed of the Newark water-works, 1, 37
- SMITH, J. WALDO, concrete in water-works construction, 459
- SMITH, O. M., value of laboratory control, 373
- SPAULDING, W. J., charges for railway water supplies, 330  
cost of meter repairs, 371
- SPELLER, F. N., service pipes, 183
- SPENCER, R. R., ultra-violet rays; their advantages and disadvantages in the purification of water, 172
- THORNELL, J. B., treatment of Missouri River water at Council Bluffs, Iowa, 70
- TOLMAN, MAYO, Hargraves-Bird electrolysis cell for chlorination, 345  
point of applying chlorine dose, 473  
water sampling, 485
- TRAUTWINE, JR., JOHN C., boiler room efficiency, 428
- WEGMANN, EDWARD, sanitation of watersheds, 33
- WESTON, ROBERT SPURR, Treasury Department standards for water, 482
- WIG, RUDOLPH J., concrete in water-works structures, with special reference to its resistance to weathering and methods of repairing it, 447
- WIGLEY, CHESTER G., enforcement of standards for water supplies, 486
- WILES, C. W., trenching machine work, 526
- WILSON, JOHN, fallacy of extending service connections to the curb line before paving, 121
- WOLFF, MARK, pumping station cost and efficiency records, 347
- WOLMAN, ABEL, quality of water and confirmatory tests for B. coli, 200
- WORRELL, M. L., financing plumbing installations, 50